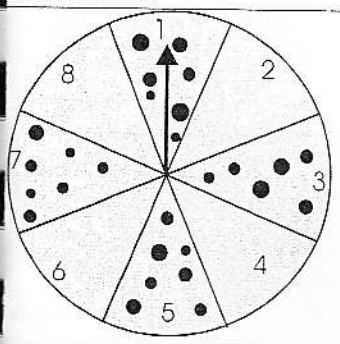
Degrees (angles)

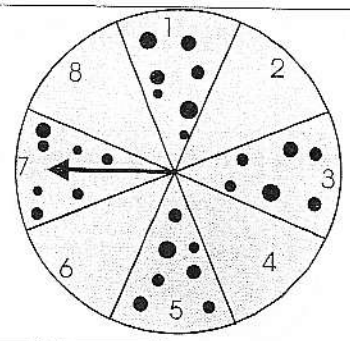
I am learning what we use degrees to measure and what they are.

Materials:

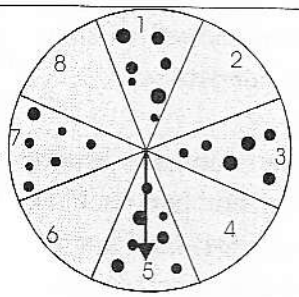


1) The circle on the left has an arrow which points to 1. How many degrees has the arrow spun in a clockwise direction on the circles in box a, b, c and d? 90°, 180°, 270° or 360°.

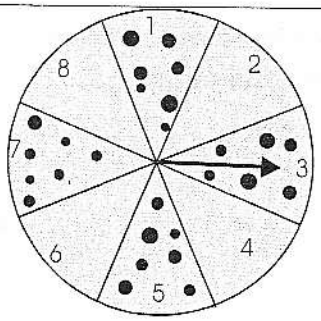
a)



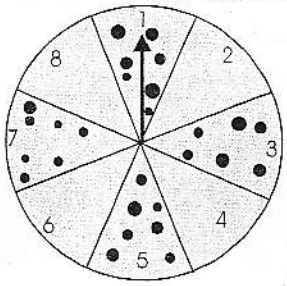
b)



c)



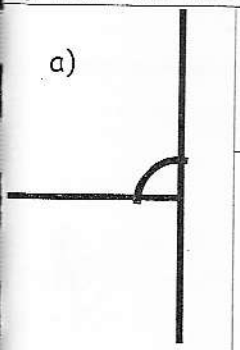
d) One full turn



Imaging:

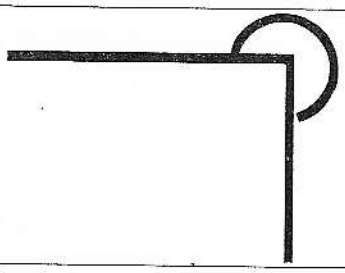
2) Work out the size of the marked angles below.

a)

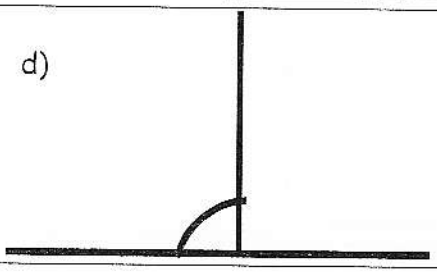


b)

c)



d)



Extended mathematical thinking:

3) A discus thrower completes two full turns before releasing the discus. How many degrees has she turned?

4) The lid of a bottle was turned one and a quarter turns. How many degrees was the lid turned?

5) A cat spun around chasing its tale for 1 and $\frac{3}{4}$ turns. How many degrees did the cat spin.

6) A child spins around 2160° then falls over. Tim knows that 360 goes into 2160 six times. How does knowing this help Tim work out that the child must have fallen over facing the same direction he was facing when he started to spin?

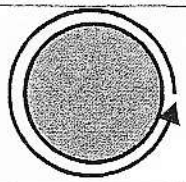
90, 180, 360 degrees

I am learning what 360, 180 and 90 degree turns are.

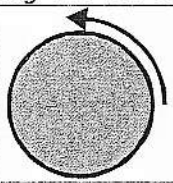
Materials:

1) Name two objects that can complete a 360 degree turn.

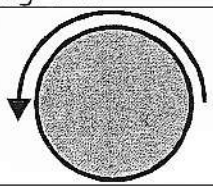
2) Complete the boxes below using the words 90, 360 and 180 degrees.



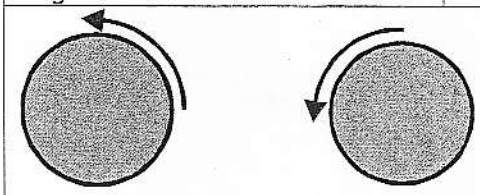
a) The arrow shows the door knob being turned ..... degrees



b) The arrow shows the door knob being turned ..... degrees



c) The arrow shows the door knob being turned ..... degrees

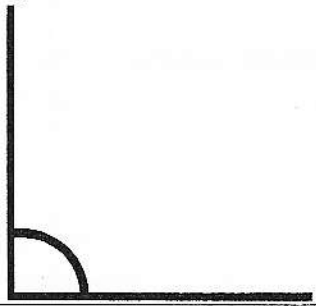


d) The door knob was turned 90 degrees and then another 90 degrees. How far has it been turned in total?

Imaging:

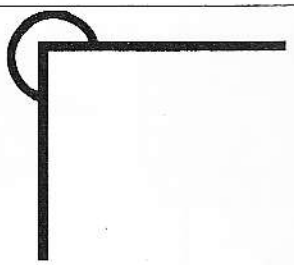
3) What is the size of the angles below?

a)



b)

c)



Extended mathematical thinking:

4) An ice skater completed two full turns. How many degrees did she turn?

5) A dancer completed a one and a quarter turn. How many degrees did he turn?

6) Jack was trying to roll a hoola hoop. It completed one and three quarter turns before falling over. How many degrees did it turn?

7) A shot putter completed three full turns before releasing the shot putt. How many degrees did she turn?

Reflect, acute and obtuse.

I am learning to describe angles using the word acute, obtuse and reflexive.

Materials:

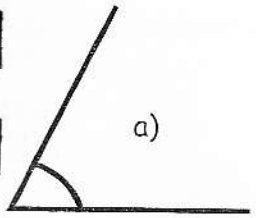
Complete the sentences below with these numbers. (180, 90, 90, 180)

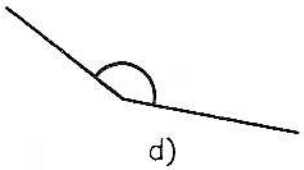
1) An acute angle is any angle which is less than ..... degrees.

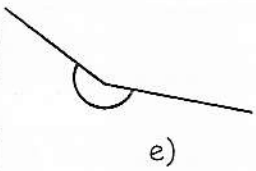
2) An obtuse angle is any angle between ..... degrees and ..... degrees.

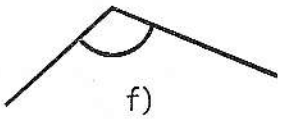
3) A reflex angle is any angle larger than ..... degrees.

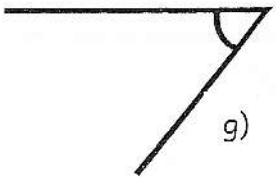
4) Below are a number of angles put the letter of the angle in the correct column below.

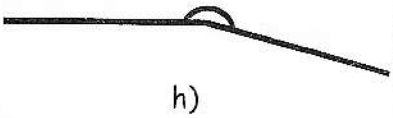












Acute	Obtuse	Reflex

5) On the table below find objects in your room that create acute, obtuse and reflex angles

Acute	Obtuse	Reflex

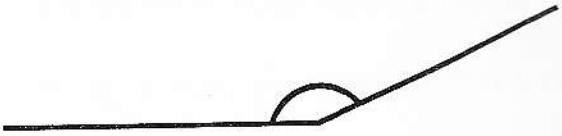
Angles along a straight line

I am learning that knowing how many degrees there are in a half turn can help me work out missing angles along a straight line.

Imaging:

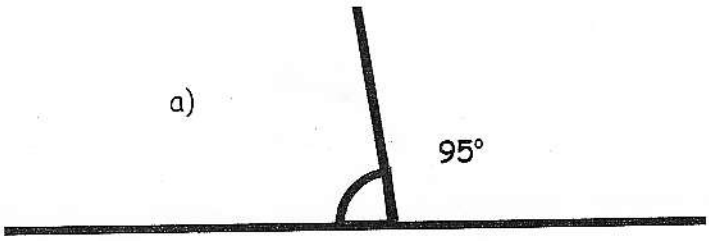
1) The diagram to the right shows a straight line. How large is this angle?

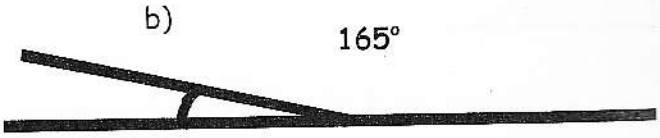
2) The angle is made 40 degrees smaller. Fill in the spaces below to work out the size of the remaining angle.

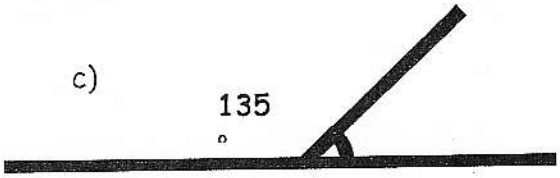


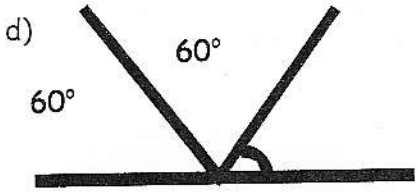
$180^0 - 40^0 =$ ..... (the size of the remaining angle.

3) Work out the size of the missing angle and write them in the table below.



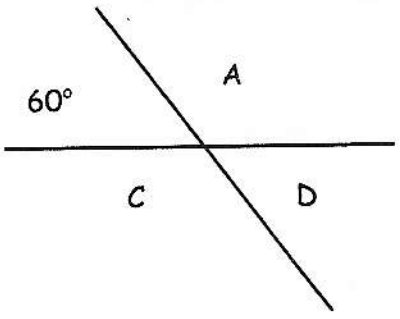






Write the size of the missing angles in this table	
a)	c)
b)	d)

4) Work out the size of the missing angles in the diagrams below. (Hint: Look for straight lines because all angles on a straight line always add to 180°)



a) $180° - 60°$ = angle A .....

b) $180° - 60°$ = angle C ..... (explain to your partner why this makes sense.)

c)Work out the size of angle "D". You must be able to explain to your partner how you worked out your answer.